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The various reports and discussions at the A.C.M. Seminar on Institutional Research led to the consensus that institutional research could make a valuable contribution in A.C.M. colleges, that A.C.M. should engage in institutional research, and that there are joint research projects that A.C.M. could carry out. Suggestions for possible studies dealt largely with research on characteristics of the colleges as seen by students, faculty, prospective students, and alumni and with research on personality and value patterns of students of A.C.M. colleges.

Report includes numerous references dealing with research on students and faculty, A.C.M. research, and other related items.

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ASSOCIATED COLLEGES OF THE MIDWEST

BELOIT COE GRINNELL LAWRENCE RIPON
CARLETON CORNELL KNOX MONMOUTH ST. OLAF

Return To A.L. Richards

20 North Wacker Drive
Chicago 6, Illinois

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Report of a

SEMINAR ON INSTITUTIONAL RESEARCH

held at "Wingspread"

the Conference Center of the

Johnson Foundation

Racine, Wisconsin,
October 5-7, 1961

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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November, 1961

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SEMINAR ON INSTITUTIONAL RESEARCH AT
WINGSPREAD
OCTOBER 5-7, 1961

PROGRAM

Thursday, October 5

12:30 P.M.	Luncheon Opening Remarks - Blair Stewart President, ACM
2:00 P.M.	First Session Speaker: Dr. T. R. McConnell Director, Center for the Study of Higher Education University of California Berkeley, California
6:00 P.M.	Dinner
7:30-9:00 P.M.	Second Session Discussion with Dr. McConnell

Friday, October 6

9:30 A.M.	Third Session Speaker: Professor George Stern Department of Psychology Syracuse University
12:00 Noon	Luncheon
2:00 P.M.	Fourth Session Discussion with Professor Stern
Evening	Free

Saturday, October 7

9:30 A.M.	Fifth Session Speaker: Professor Theodore M. Newcomb Department of Psychology University of Michigan Ann Arbor, Michigan
12:00 Noon	Luncheon
2:00 P.M.	Sixth Session Discussion with Professor Newcomb
3:00 P.M.	Seventh Session Planning Session

BACKGROUND OF THE SEMINAR

At its spring meeting, May 1-2, 1961, the ACM Board of Directors authorized the establishment of a committee of ten to identify and formulate research subjects of general interest and of greatest promise for ACM. Each President was asked to name from his college an individual to serve on the committee. The committee met in June, and following a discussion of recent institutional research at each ACM college and the possible focuses for a joint ACM research program, the committee concluded that before it could define and launch a research program it needed to become more familiar with the possibilities of institutional research, with the tools of institutional research, and with the research work that has been and is being conducted in the field. The committee authorized the staff of ACM to organize for the committee a seminar on institutional research as a way to provide the committee with the necessary background on which to chart its work. The calling of the Wingspread seminar was the result, and each college was asked to designate three or four representatives to attend.

Consultants for the seminar were:

T. R. McConnell, Director
Center for the Study of Higher Education
University of California, Berkeley

Theodore M. Newcomb
Professor of Psychology
University of Michgian

George Stern
Professor of Psychology
Syracuse University

Background papers for the seminar included:

1. H. T. Sprague (editor), Research on College Students: Institute Lectures Considering Recent Research on College Students' Motivations, Values and Attitudes, and Campus Cultures. Western Interstate Commission for Higher Education, Boulder, Colorado, 1960, 188pp.

2. University of Michigan Survey Research Center, "Student Development at the University of Michigan: A Research Proposal Submitted to the National Institute of Mental Health." Survey Research Center, November 1, 1960, 22pp.

3. Blair Stewart, "The Problem of Adequate Teaching Staff for Liberal Arts Colleges." (Multilith) Associated Colleges of the Midwest, September 9, 1961, 3pp.

4. Lloyd Pulliam and Blair Stewart, "A Tentative Proposal for a Cooperative Effort in the Development of College Teachers." (Multilith) Associated Colleges of the Midwest, September, 1961, 3pp.

RESULTS OF THE SEMINAR

I. Agreement that ACM should be active in institutional research.

There was concensus among those who attended the seminar

A. that institutional research could make a valuable contribution in ACM colleges

B. that ACM should engage in institutional research

C. that there are joint research projects that ACM could carry out

D. that ACM could be helpful to the colleges in their conduct of institutional research

E. that the possibility of cooperation with the University of Michigan should be further explored.

Ideas were not completely formed regarding what and how research should be conducted, but it was felt that much progress had been made in opening up the possibilities. It was clear that the group felt that ACM should act in this field, and there was some feeling that little could be accomplished until a staff member was appointed for institutional research.

In the meantime groundwork could begin on each campus under the leadership of the members of the ACM committee on institutional research. ACM staff would be available to assist. It was suggested that faculty meetings on each campus devote time to the subject of institutional research, provide information on the subject, invite faculty reaction, seek to define goals and consider what might be done on each campus, how the various colleges might cooperate, and how ACM might assist. Arrangements would be made in the near future for members of the committee on institutional research to visit the University of Michigan to learn more about its program and the test instruments already available.

Blair Stewart affirmed that ACM would endeavor to "keep the pot boiling." If ACM is to seek financial support for the program, he said, wide participation would be essential. Single college projects, however, might be supported by the individual colleges and would be encouraged by ACM and information about them shared through ACM. Whether or not ACM staff were added for institutional research, Stewart said, staff work would be done. ACM

would give to institutional research all the attention possible in the light of its other responsibilities.

There is concern, of course, Stewart noted, regarding the possibilities which might raise questions about the value of particular programs. We are coming to the point, he said, when we will have to think in a much more fundamental way about the liberal arts college as an institution. We can't just rely on our objectives; we must examine them. At present we have little evidence to go on. Eventually we may reorganize our educational procedures in order to achieve our objectives more effectively. Part of the process may be the disillusioning experience of finding out that instruction is not even doing what we want it to do now. We must examine our aims and procedures, he concluded and institutional research is the way to begin.

II. Recommendations by the ACM Committee on Institutional Research

The ACM Committee on Institutional Research met during the sessions and recommended to the Board of Directors of ACM

A. the establishment of an Office of Coordinator of Institutional Research. The functions of the office would be to coordinate and conduct cooperative research programs for member colleges. In addition, the office should provide consultant services and where possible technical facilities (scoring and analyzing of data) for institutional research programs of individual member colleges.

B. the hiring of a person and/or staff to serve the member colleges in developing programs of institutional research.

C. that the staff of ACM prepare a report on institutional research based on the the seminar to assist the member colleges in making their plans for future individual and joint programs.

III. Suggestion of an ACM Reporter on Institutional Research

It was apparent that a considerable amount of institutionalresearch was being carried out already on ACM campuses, some in a very preliminary way, some very limited studies of small samples, some rather informal surveys, and some quite sophisticated studies.

These activities were generally not reported and often not widely known even on the campuses where they were conducted. There appeared to be general interest in sharing information on this work, but there was hesitation to publish reports which would not qualify as professional literature. Reports while of general interest and value were often not of a type that their authors regarded them worthy of publication and would be willing to sign, thereby suggesting that they considered them scientific studies based on adequate research designs.

It was suggested that ACM consider publishing a multilith reporter dealing with current institutional research activities on ACM campuses and developments in the field of institutional research around the country. Such a journal if published in an informal format could permit sharing of information and experience without placing anyone in the position of staking his reputation on the reports. Circulation of such a reporter could serve a valuable purpose in the sharing of research ideas and activities on ACM campuses and also serve to develop interest and support for later more ambitious efforts in institutional research.

It was suggested that the reporter might serve also as a vehicle for reporting for the whole range of ACM activities. This would help with the larger problem of communicating to ACM faculties regarding the role of ACM. It was suggested that it would also help if there could be a brief report on ACM activities at each general faculty meeting at ACM colleges. One delegation felt that more was to be gained in this way than by communications by mail.

IV. Summary of Written Comments of Participants

Before the delegates left Wingspread, they wrote short statements indicating what sorts of research, if any, they thought the ACM colleges ought to undertake. Since the statements showed rather remarkable agreement, these papers provide a possible basis for the next steps in developing an ACM program for institutional research.

Delegates' suggestions fell largely in two areas:

1) Studies of the characteristics of the colleges as seen a) by the students, the faculty, the administration - people who know the school at first hand - and b) by prospective students, parents of students, alumni, high

school counsellors, and other groups who generally see the college at a distance. A number of delegates suggested the Pace and Stern College Characteristics Index as the most effective instrument for getting at the sort of college "image" they were concerned with; a study of how students on various campuses allot their time might yield related information. They were interested in discovering, further, how a public image develops and how it can be changed if it does not accurately reflect the college as it is. The delegates hoped this study might provide clues as to why students choose one college rather than another and why they are unhappy or happy when they arrive. If the students' expectations for the college before they come could be compared with their impressions after they arrive, this information might correlate interestingly with the students' general satisfaction with college, with their grade-point averages or with the drop-out figures.

2) Studies of the personality and value patterns of students at ACM colleges, measured by the Allport-Vernon-Lindzey Scale of Values, the Otis Personality Inventory, or the Pace and Stern Activities Index. The delegates thought these instruments, supplemented by information about the students' economic, social and cultural backgrounds, would give a picture of their student bodies that few colleges have had up to now. This information might help colleges discover why some students do much better work than others of equal ability. It might show other things as well: for example, whether the composite personality of the student body is related to the image of the school; under what circumstances students with atypical personalities or values not widely held on the campus tend to form groups of their own - "sub-cultures"; whether students with certain personalities or values are more likely than others to become student leaders. Perhaps the most important use to be made of this information, delegates thought, would be the discovery of how student personalities change, if at all, from the time the students apply for admission to the time they graduate (or later), and what causes the changes - the academic program, extra-academic activities, student cultures or sub-cultures, or other factors. Several delegates pointed out that before this information could be really useful to the colleges, they would need to decide what changes they would <u>like</u> to produce in their students, what values they hope

their graduates will hold. Further, if the desire for intellectual development is one of the values colleges hope to inculcate, might it be well to look for a better measure of intellectual development than the grade-point average? Though no one delegate mentioned all these activities and no one phrased his statement in just this way, the delegates agreed rather strikingly that research ought to be undertaken in these two fields -- the college image and student personality and values. Clearly the first of these is the simpler: the Pace and Stern Index has been fully tested (though possibly it has never been used in just the way the delegates suggested), and a study of the characteristics of the colleges could probably be completed in a year. The second study is more complicated and might require several years, depending on how far the implications of the study were pursued.

Projects addressed to recruiting and retaining faculty got warm support from the Coe and Knox delegates but from few others.

Many delegates had suggestions, too, for the steps ACM should take in initiating institutional studies. Eleven delegates discussed the possibility of hiring a research director or a staff coordinator to help conceive and set up the projects. Eight of the eleven favored hiring such a person now. The other three thought plans ought to be more clearly formulated before anyone is hired. Five delegates favored the possibility of working cooperatively with the University of Michigan, provided the ACM colleges would not need to be involved in all parts of that elaborate program; this cooperation, they argued, would not only provide a large body of comparable data, but it would also enable the ACM colleges to use tests and questionnaires prepared by the University of Michigan staff and to call on that staff for professional advice in setting up and carrying out the studies.

The other responses were scattered. Two delegates favored acquiring data processing equipment. Some suggested beginning by preparing a bibliography of institutional studies or by discovering what information ACM colleges already had about themselves and circulating it; others urged faculty discussions to provide broader faculty interest and support for the program. Several said no plans for procedures could be made until the colleges had decided what information they really wanted to collect. Some of the delegates, looking ahead to the end of the studies, urged that the results of the studies be shared

openly insofar as possible, and that the results be interpreted so that they could readily affect college policies.

V. Vote of appreciation to the Johnson Foundation

It was moved by Mr. Von Eschen of Beloit College that an expression of grateful appreciation be conveyed to the Johnson Foundation in behalf of the conference participants for the opportunity of holding the Seminar on Institutional Research at Wingspread and for the outstanding assistance and hospitality provided by the staff of the Foundation. The motion was passed unanimously.

RESEARCH ON STUDENTS

Summary of Remarks by Consultants

I. T. R. McConnell, Director, Center for the Study of Higher Education, Berkeley

A. Describes research on students being conducted at the Center

The Center for the Study of Higher Education is making a study of student development at certain institutions (Antioch, Reed, Swarthmore, and San Francisco State). The study is exploring the social, ethnic, religious and cultural backgrounds and the motivations, goals and dominant personality traits of students as well as their cultures and sub-cultures in an effort to discover how these factors affect intellectual development.

B. Lists factors which appear to be related to intellectual development

High rating in the theoretical-aesthetic area, in thinking introversion and complexity; interest in ideas; degree of exposure to books; ideas concerning the purpose of college and the characteristics of an ideal job.

Grades and wealth appear not to be related to interest in ideas. Studies show that even in highly selective colleges there is a wide variation in what students have read, whether or not they have read poetry and the number of books in the home, and in personal ownership of books. Some religious groups have high scores on authoritarian scales. This suggests a tendency to rigidity and intellectual suppression

C. Identifies four kinds of college cultures

1. Strong, academic intellectual press--two sorts, scientific and humanistic
2. Vocational, professional
3. Collegiate culture
4. Rebellious - non-conformist

There appear to be differences in student characteristics from one institution to another, differences in the narrowness and scope of college environments, and a measure of congruity between traits of students and the demands of the collegiate environment they select. Some colleges attract different kinds of students from others. There is indication, for example, that the Ivy League colleges

attract students who are more interested in ideas than in vocational goals. The presence of many whose immediate goal is vocational will give another cast to a college. But there is an enormous variation among schools and within schools. Some colleges provide a very narrow frame. A narrow range of alternatives for students puts a burden on the selection of suitable students. The highly emotional and rebellious, while they are likely to be high on theoretical and aesthetic scales, may not succeed in a narrow environment but may develop well in an environment where there is a wide range of choice. The liberal arts college, according to McConnell ought to avoid developing the vocational and collegiate environments. Where there are many students primarily interested in vocation or social activities, the liberal arts college must seek to interest them in ideas, but too narrow an academic program in terms of student characteristics can impede interest in ideas. There is a distinction between quality of learning and quantity of assignment. Dogged pursuit of learning may impede zest for learning. Similarly student life may create barriers between student and faculty. The problem is to get students into environments where they can best develop their talents.

D. Offers research suggestions
What are the ACM ingredients? A containment culture, a well-regulated home away from home or a broader horizon? How pluralistic, how homogeneous a group of colleges is ACM? What are the basic attitudes and values of the campuses? What are the educational and vocational goals of the students? How homogeneous are the student profiles? What is the image of their college held by the students? The colleges might look at the students in terms of the objectives of the colleges and in relation to students at other colleges. They might find out as much as possible about their students and then compare the achievement of similar students across the colleges. Such studies might lead to efforts to look for different kinds of students or to change the image of the institution in order to affect self selection.

Other suggestions:

1) What makes intellectuals form a group on one campus and be ... isolates on another?

2) What is the distinction between those who change during the college years and those who do not?
3) Is there a correlation between need for affiliation and need for achievement?
4) How might grouping of students according to personality characteristics affect learning? There is evidence that students in the natural and social sciences have different personality traits and values. The same may be true of those who teach in these areas.
5) What are the sub-cultures on each campus and how strong are they?
6) Is there a correlation between personality profiles and choice of major field?
7) To what extent is there a fit between ACM students and their college environments?

II. George Stern, Professor of Psychology, Syracuse University

A. Identifies four areas of study: 1) recruitment of students, 2) allocation of students, 3) retention of students, 4) achievement of students.

1. Recruitment of students
Little is done to control the type of student applicant. Many tend to choose colleges within ranges. A bright student in a small community in the West is not likely to think of Harvard. Choices are limited and determined by many factors. What parents, counsellors, seniors in high school think about what is obtainable or desirable is very important. It is important to know what image potential students acquire of an institution. Colleges get stereotyped. There is need to know more about the relationship between the image applicants have of an institution and the characteristics of the students who apply, to relate backgrounds to expectations for college. It may be enlightening to ask applicants to describe their high school and what they expect college to be like. Many students with high potential don't apply for wrong reasons. The implication is that if institutions knew more about the type of students they attract, how they attract them, and what the students expect at the institution, they might be able to take steps to attract students better able to benefit from the college program and better able to contribute to the goals of the college.

a. Questions raised:

* What untapped sources of students will provide students likely to profit from the type of program ACM colleges seek to offer? This question could lead to a study of high school seniors to determine what types of seniors who might benefit by attending ACM colleges are being overlooked because of their lack of accurate knowledge of ACM colleges. This suggests also a study of the media of communications to students.
* What kinds of shifts in the personality characteristics of students would result from changes in admissions criteria or image changes? The base for admission may be economic (narrow). What would be the effect of shifts to an intellectual base (also narrow)?
* College Board, ACE and Iowa Scores give one type of information on cognitive aspects. What non-cognitive aspects are significant in predicting intellectual potential?
* What does it take to do well at X institution? What type of student does well?

2. Student allocation
Where he fits in. What courses he takes. Stern referred to allocation as a technical problem. He felt it would be possible for students to complete initial registration on cards and then to match the cards with standardized sets of programs. The range of choice, he said, is sufficiently limited to permit doing this by machine. Counselling would then be concentrated on the few whose cards could not be matched with available programs. In this way counselling could then be utilized more effectively. Machines could also help with registering grades, for billing, class inventories and the like, thus removing these burdens from faculty members.

3. Retaining students
Drop-outs represent both human and financial loss.

a. Transition problems - high school to college. Stern felt there was great value in orentation programs aimed at introducing freshmen to the character of the institution and creating accurate expectations.
b. Introductory courses. Freshmen often have high expectations regarding college, expectations of challenging

and stimulating intellectual experiences. Typically, however, introductory courses are conducted in large sections with junior faculty members. Image of a college is derived in large part from these first experiences. Freshmen leave high school behind to find the wonders of college. They expect intellectual experiences far above what seniors are likely to say they had. The problem is to avoid dampening their enthusiasm. There is need to know more about students who withdraw, about teaching techniques, what they are, what are their effects. The problem may be that of students who come from a basically authoritarian culture and find it difficult to adjust to the non-authoritarian sub-culture of a liberal arts faculty.

4. Achievement of institutions
Research on student commitment. There is need to investigate the complement of the freshman's expectation, i.e., what did the seniors find college to be like and what did they hope it would have been like. There is need to know more about the intellectual characteristics of seniors and to analyze students' feelings of fulfillment and achievement. What kind of impact has college had on those who stayed?

Faculty, trustees and administrators might also be asked to describe what the college achievement is now and what they hope it will be like in the future. Responses would constitute a good index for the future of the institution. There is need to understand where the institution is now and where it can go.

B. Describes types of institutions
There are many differences. Purposes differ. Schools attempt to do different things. If all accept intellectual performance as the sole objective, the good schools will grow better, and poorer institutions will grow worse, because quality attracts quality. Those who have will receive the dollars, the students, and the faculty. Fortunately there are many roles and purposes for schools to fulfill.

1. Institutions which stress academic achievement. These institutions which have an academic orientation are characterized by interest in achievement, interest in academic-related things and a sense of having an impact on society.

2. Institutions which stress social dependency, custodial care and paternal supportiveness. These schools are characterized by submission, deferring to control and support of others. They are constraint schools.

3. The collegiate schools, schools characterized by pageantry, student life and social gregariousness. Many are state institutions in the South. There is a lot to do in these institutions besides study. In describing their college life the students are unlikely to mention the faculty. In these institutions academic activities serve to relate students to each other.

4. One small body of schools stresses independence. These schools are small, elite, private liberal arts colleges. Among them are some which are more lenient, permit more autonomy than students are ready for. They sometimes set up an ideal which is unattainable for both students and faculty.

5. Some other types don't seem to fit the above categories. They tend to be on the autonomous side. They rank high academically and are very selective in the type of intellectual experience they offer. They may specialize in art or music, for example. Another type stresses community service.

Most schools show conformity between their characteristics and the needs of students. Organizational detail may be a high value on some campuses. A neat campus often goes along with neat student papers, compulsiveness to be neat. Custodial care, for example, goes with need for care. Dominating personalities, those who reject authority and express aggressions and hostilities tend to go to institutions where there is a high degree of independence and little close custodial supervision.

III. Theodore Newcomb, Professor of Psychology, University of Michigan.

Professor Newcomb is making a study of student development at the University of Michigan. His assumptions are that undergraduate education can be improved and there cannot be improvement without systematic information about students and about the institution. Successful industries have as a matter of policy carried out research aimed at improvement of the quality of their products. It is rare for colleges and universities to have such a policy. An exception is Antioch which has a budget line devoted to the assessment of educational processes. Newcomb expressed hope that the time would come when all colleges would naturally include in their budgets funds for institutional research.

The University of Michigan has embarked on an ambitious, comprehensive program of institutional research. A university is like an organism, Newcomb said, a totality. It has systematic properties, parts which are interdependent, and process which is related to input and output. Two years ago, under a grant from the National Institute of Mental Health, the University undertook to launch a study of these factors as they affect student development. A similar study is being conducted at Harvard College for comparative purposes. A year has been spent in planning the Michigan project, in getting acquainted with the persons, offices, student life, organizations and groups which constitute the University. This preparation was necessary to plan the research design and to assure that the research would have the support of faculty, students and administration. The project will probably take six to eight years to complete.

Specifically, the aims of the research are:

1. To ascertain <u>specific changes</u> on the part of undergraduate students between entering and leaving college;
2. To relate these varying kinds of change to certain kinds of <u>student experience</u>, especially in peer groups;
3. To relate both student experience and specific changes to <u>input variables</u>, i.e., scores at entrance on achievement, aptitude and personality measures.

4. To discover how observed student changes are associated with organizational variables;
5. To assess student changes in the light of comparable data from other colleges;
6. To distinguish the effects of university experience from those of generational influences, maturation, and non-university experience;
7. To ascertain the degree to which changes observed during college years persist, develop or show regression after graduation.

The research design to realize these aims includes measures of students at entrance and at graduation, as well as experimental changes in residential arrangements and student-faculty interaction.

A. Student input

How can the University assess and improve its program unless it has information about input (students who come). Data is being collected on 1/3 of the freshman class - college boards, SAT's, et al. But more needs to be known than test scores. Questions being asked include: "What did you think was distinctive in the University of Michigan? To which other institutions did you apply? Why did you want to go to college? What sort of career do you seek? What do you think the social life, the faculty will be like? How did your family influence your choice? etc. Data is also being collected on the students' family relationships.

What sorts of students are most likely to profit from attending the University? The research program is developing some hopefully promising instruments to indicate potential for intellectual development. These instruments are attitudinal mainly and deal with values, interests and goals which seem to be related to intellectual outcomes. Thinking introversion and theoretical orientation (intellectual venturesomeness) seem to be involved. Faculty were asked which students had profited most. Those students also tended to excell in the measures which had been developed. Similarly students at the leading academically-oriented colleges have scored high on these instruments.

B. Nature of the institution as a social system
There are a limited number of pathways a student can take through college, formal and informal, more or less well travelled.

C. Experience - the nature of student experience is hard to describe and measure.

It includes the courses students take, their residential experience and other forms of interaction. There is a rich and complex student culture which is generally not understood. Sororities and fraternities, which are mainly outside the control of the University, have enormous influence on intellectual development and on attitudes toward the life of the mind. Spacial and ecological factors such as residential arrangements affect group formation which in turn affects intellectual development. These matters are [illegible] organized by the University without reference to their effects on intellectual development. Students spend an enormous amount of time in small informal groups, through which attitudes are learned. One type of technique to find out about these informal associations and the process of selecting groups is the snowball interview. One student is interviewed and then asked with whom he associates. These persons would then be interviewed, and they would in turn be asked with whom they associate, etc.

D. Outcomes
The key factors are student input, [illegible] peer group, faculty and institutional influences listed in order or their presumed importance. These are interdependent factors. The faculty influences peer group activity, for example, and effective education goes on in this way. If the faculty is to be effective, its influence must affect not only individuals, but also student groups.

Students with certain characteristics are put into institutions with certain characteristics with what outcomes? What kinds of students show what kinds of change? Does the output match the objectives of the institution? To assess output, efforts will be made to follow up on students for several years after graduation. Controls will include a group who don't attend college at all, although it is difficult to find a group

intelligent enough, well enough off, and motivated to go to college, but who do not attend.

Do students of similar backgrounds with similar university experience obtain similar results? Which factors are the most significant in determining the outcomes of college experience? The University of Michigan is seeking to find some answers.

RESEARCH ON FACULTY

Summary of Discussion of a Proposal Developed by Lloyd Pulliam and Blair Stewart

The Seminar on Institutional Research included discussion of a proposal for a cooperative effort in the development of college teachers. The proposal assumed that faculty for liberal arts colleges will come largely from liberal arts colleges. Efforts, therefore, should be made by liberal arts colleges to identify from among their students those who are potential teachers and to help them to identify with teaching. Such efforts might at the same time improve learning. Steps should then be taken to expedite the process of preparing for teaching (earning the doctorate) and for induction into college teaching. Such steps might include financial aid, assistance in meeting the language requirement, special seminars for future teachers, and an internship in an ACM college. If a group of colleges became more concerned with the production of college teachers it might provide a useful service to education in general and at the same time serve its own needs for new faculty. Without such a program the liberal arts colleges are at the mercy of the academic culture which militates against teaching in liberal arts colleges. Graduate schools are concerned more with research than with teaching.

A first step might be a study of ACM faculty to discover their academic origins, graduate preparation, expectations with respect to further graduate study or research, and career attitudes and aspirations. The study might include also a study of the relation between graduate work and teaching to determine where graduate schools make a contribution and what is not done that might be done to prepare graduate students for college teaching.

McConnell said that it was true that seniors in universities rarely consider liberal arts teaching as a vocation. He supported the idea of recruiting from liberal arts colleges. Science students, he pointed out, decide on careers before social science students. The faculty plays an important part as a role image. The close contact with faculty in the laboratory, he felt, might explain this earlier identification with the field on the part of science students. He suggested devising ways to bring faculty and students together in a similar way in other fields. Students are influenced more by informal than by formal programs, he felt, and he stressed the importance of example and demonstration.

Assisting students to meet their language requirements and additional fellowships would also be good possibilities, he said. If the M.A. is to be sufficient preparation for college teaching, he said, colleges must find additional means to promote the scholarly advancement of their faculty. Completion of a degree too often leads to a diversion of interests and thus, even for the Ph.D., much could be done by colleges to promote continued faculty advancement.

McConnell agreed that faculty working conditions were one of the most important aspects of teacher retention. A good study of this area, he felt, would reveal some real possibilities. Other possibilities which might be explored include:

1) Expectations of the faculty when new to the institution and how these change over time.
2) How college teaching seems to faculty members in different situations relative to the doctorate - the Ph.D., the ABD (all but dissertation), the M.A.?
3) Faculty image of the institution. Have faculty describe the institution, describe the typical student and the ideal student. The same might be done with students. Analysis of the different perceptions of faculty and students might lead to steps which would contribute to teacher retention.
4) Characteristics of good teachers. Attempt to discover the characteristics of those doing well as teachers and then try to select as future teachers students with similar characteristics. Good students may not have the same characteristics as good teachers. Similarly the characteristics of those now teaching may not necessarily be the characteristics best suited to teaching.

Blair Stewart questioned beginning with a study of the personalities of faculty. He felt it would be better to concentrate at the outset on the satisfactions and dissatisfactions of teaching, on the Ph.D. and its relevance to teaching, on the faculty image of the institution and how this has changed since the faculty has been on campus.

The suggestion was made that emphasis be put on the idea that a liberal arts college is a special kind of place. There is need to discover and to publicize what makes it attractive and rewarding to teach in a liberal arts college. Faculty recruitment and retention, it was felt, depend most on the quality of a school's educational program.

LAUNCHING A PROGRAM OF INSTITUTIONAL RESEARCH

The University of Michigan spent two man years developing understanding of its program and enlisting cooperation before launching the program. In small institutions these steps may be even more important, particularly the matter of enlisting student interest. Newcomb felt it would be important to work through the student presidents. He said it would be unfortunate if the students came to regard a research program as undesirable intervention in their affairs or an effort to prove, for example, that fraternities are anti-intellectual. Groundwork is essential. No group should be forced to do anything it doesn't want to do. Plans should be discussed with the full faculties and with faculty committees, following meetings with key faculty members. A faculty advisory committee and student advisory committee might be instituted. One can't assume that others will agree on the importance of a program or the amount of time and effort that should be given to it. Potential faculty opposition stems from the fact that humanists often fear destroying values by measuring them, and scientists fear that social science measures are too inaccurate. The suggestion of institutional research to some is like saying, "Do you mind if I open your abdomen in the interests of science?"

At Michigan among the early steps has been to have the various departments define the outcomes they are seeking in student attitudes and values, not as a way to evaluate the departments, but as a way to assess procedures in terms of their suitability for achieving the desired outcomes.

Decisions must be made as to which instruments to use. Stern felt that it is probably essential to set aside a day for administering the tests. Otherwise it is too difficult to assemble people. It is always difficult, for example, to get non-resident students assembled. Decide in advance, he said, on a sample or take 100% of a small sample.

A valuable beginning might be to determine the characteristics of the ACM colleges, to find out whether they are like or dissimilar schools and how they differ. The results of the College Characteristics Index could be the basis for faculty discussions of next steps leading to change. These might be to analyze the input (the characteristics of entering students) and faculty awareness of the characteristics of the student body, or a study of students as they are and as the faculty would like them to be.

Later it would be possible to think in terms of teaching procedures related to characteristics of the student body, and experiments on such questions as the relative effectiveness of homogeneous and heterogeneous classes, or the things that a teacher does to develop and change attitudes. Do the profiles of faculty match those of students? Which pairing results in the most effective learning? Exploratory research seems appropriate here.

There was discussion of the Antioch-Carleton-Oberlin study of the differential effects of much and little student-faculty relationship. This study had indicated that extended student-faculty relationship makes no significant difference. Various hypotheses were put forward to explain the results - that the communities were small, that students had self-concepts that determined their achievement regardless of faculty contact, etc. Blair Stewart felt that not enough had been done to define the important things that the faculty do. He suggested that these things might be limited to providing motivation and stimulation and making clear to the student what the task is and what good performance is. But more research is needed on the teaching function.

QUESTIONS AND ANSWERS

Question: Has the Allport-Vernon-Lindzey Scale of Values been factored?
Answer: Yes. Religion, for example, factors into compliance with things as they are, acceptance of authority, and humanitarianism. This helps explain why a high score on the religious scale corresponds with a low score on the intellectual. The profile on the AVL which correlates best with intellectual interest and to some extent with grades is one which is high in the aesthetic-theoretic area and low in the religious. Unlike the Otis Personality Inventory, the AVL is a rank-order instrument which makes it impossible to be high on several scores. It produces a total profile.

Question: Isn't there a danger of typing schools?
Answer: We have to be willing to look at ourselves as we are.

Question: Should differences among institutions be stressed or eliminated?
Answer: It depends on whether the differences are adding to or subtracting from the main business of the institution.

Question: How might an institution change its image? What practical steps can be taken?
Answer: A charismatic personality (Hutchins, for example) can do this. Changes can also result when issues are raised and sharply underlined. Changes in admissions policy, and promotional literature, in course offerings, in characteristics of new faculty all have their impact.

Question: Should information derived from institutional research be shared with other institutions?
Answer: This would depend on what the schools desire. There could be an open book policy, or analysis could be presented coded in such a way that each institution could identify itself but not the others. Interestingly enough, weaker institutions often welcome institutional research the most willingly and are often the most willing to share data. Another procedure could be to identify schools of a given type and compare them with norms, benchmark institutions. Individual schools could remain anonymous if they so desired. The main point is that the schools be committed to the program of research as something of validity and value to them.

Question: How might data be used?
Answer: It is important to stress the source of the data. Student opinions are facts. Inferences regarding them may differ. "Custodial care," for example, can have a positive or negative connotation. This is what students think, so what should we do about it? This is what we look like. Do we want to keep doing these things? What do we do now? The problem is that no one has been looking in the mirror. We ought to know what type of an institution we have in fact. The data of institutional research can so inform us. What we do with the data depends on the purposes of our institution. It is interesting that admissions offices are usually the first to ask for help and to see ways to use data.

Question: Is there a disadvantage in a faculty member conducting research on his own institution?
Answer: It is perhaps best to study ones own campus. The more people involved locally the better.

Question: Does it make sense to select students who have the qualities at the outset that are desired at graduation?
Answer: The problem is to select students who can profit from the college program. If the student's background is favorable but he scores low on instruments designed to test potential for intellectual development (e.g., McConnell's instruments), he is probably a poor bet to profit. If, however, the background is unfavorable and the student scores low on intellectual potential, he may not necessarily be a bad bet. The college may be able to compensate for the poor background. It depends on the kind of institution involved. You have to decide what you want and the criteria you want to maximize.

If you hold intelligence constant (equal) those who demonstrate at entrance (have acquired) certain independence will go further and faster than others with the same intelligence who have not acquired independence. It was reported that a study at Grinnell suggested that students who felt strongly influenced by parents and relatives to attend Grinnell achieved less well in the freshman year than those who chose Grinnell independently.

Question: How can educational achievement be measured? Isn't grade-point average an unsatisfactory criterion?

Answer: Grade-point average is admittedly a crude instrument to

measure objectives. Its meaning differs among colleges and within colleges. An ethos has built up about it. We need to know more specifically what it takes to do well at a given institution and what types of students do well. Grade-point average is a short term evaluation. It is possible to think of evaluation in longer terms. Perhaps, after all, we are measuring the wrong things. What is the relationship of grade-point average to those students whom the faculty thinks "have profitted?" Is it more a matter of attitudes and learning resourcefulness than of grades? It might be useful to get faculty to try to describe the key attitudes they try to develop in students.

Question: Should ACM appoint a coordinator of institutional research now?

Answer: The matter of machinery is probably premature at this time. It is hard to describe the person wanted until it is somewhat clearer what type of research is to be done. A coordinator when appointed would be primarily concerned with cooperative or joint research, but would probably also be available to consult on research problems with individual colleges. If ACM is to cooperate in research with the University of Michigan, it is probably essential that there be a full-time ACM coordinator.

Question: How much released time would be needed locally to carry out a program of institutional research?

Answer: This would depend on the amount of secretarial and clerical help available. Probably the person or persons carrying out the research locally would have to devote at least one-third of their time to the research. At times a research project becomes very time-consuming. This is true for the planning stage, for the data gathering, and for the interpretation of data. It may be inadvisable to use student aides if the work involves seeing other students' responses.

Question: Would it be better for ACM to define its research problems locally?

Answer: Yes. Determine your own research interests first and then check to see if appropriate test instruments or research procedures are available at the University of Michigan or elsewhere.

Question: How might ACM cooperate with the University of Michigan?

Answer: Each ACM college will have certain idiosyncratic differences and differing faculty interests, but there will also be some common interests, or interests common to several institutions. The University of Michigan can't draw conclusions from its data, or only limited conclusions, unless it has the possibility of developing data in other environments. With the ten ACM colleges, plus Harvard, Berkeley and perhaps others, there are exciting possibilities both for developing comparative data and for a number of different investigations to be made. Michigan could serve as the middle-man, providing the facilities, data-processing, test instruments and the like. For some instruments there are already norms for specific colleges or types of colleges.

Michigan feels that it has much to gain from cooperation with the ACM colleges. It would seem that almost any program of institutional research an ACM college wanted to undertake could be paired off with some aspect of the Michigan project. Michigan is interested in what kinds of students it selects, the difference between those who apply and those who don't, those who come and don't come, and the characteristics of those who apply and are accepted. ACM colleges are surely interested in these matters as they pertain to their own institutions. Michigan wants to know what kinds of students it attracts, what background factors relate to desire to attend a given institution and how these factors affect student development. Are variables standard or are they peculiar to the institution? Comparisons between the University and ACM colleges would be of very great interest. The advantage is that the research possibilities can be worked out locally by each ACM college.

Question: Would it be possible to have technical and consultative services from the University of Michigan prior to a commitment to cooperative research?

Answer: Yes. The only problem would be that of time. Perhaps a better idea would be for a group from ACM colleges plus ACM staff to visit Ann Arbor for a day or two. The problem is to define research interests for the various ACM colleges and then to consult with the University regarding existing test instruments, the possible need for new instruments, and the possibility that other colleges might also be included in a particular study. Cooperation might be worked out through a series of ad hoc conversations.

Question: Do you see participation in the program of the Univesity of Michigan as basic research or as related to issues the colleges are currently facing?

Answers: Both really. Institutional research can make a basic contribution to the whole profession of education, and it will sooner or later make a difference locally.

PARTICIPANTS

BELOIT COLLEGE
Neville L. Bennington - Biology
Warner B. Mills - Government
Donald A. Summers - Sociology
Edwin F. Wilde - Mathematics
Clarence Von Eschen* - Education

CARLETON COLLEGE
Peter M. Guthrie - Psychology
Joseph D. Havens - Psychology
Jean Phillips - Dean of Women

COE COLLEGE
Irving Churchill - English
Mary Alice Ericson - Sociology
Howard S. Greenlee - Dean of the College
John A. Wilkinson* - Registrar

CORNELL COLLEGE
Arland F. Christ-Janer - President
Stuart J.E. Good - Dean of Student Affairs
Earle Scott - Psychology
Jean S. Tompkins - Dean of Women

GRINNELL COLLEGE
Lathrop V. Beale - Sociology
James E. Stauss* - Dean of the College
Dale Terry - Registrar
Givens L. Thornton - Psychology

KNOX COLLEGE
Rene Ballard* - Political Science
Herbert Priestly - Physics
Lloyd Pulliam - Education
Donald Torrence - Speech

LAWRENCE COLLEGE
Frank Bessac - Anthropology
Dorothy Draheim - Resigtrar
Mary Morton - Dean of Women
Edwin Olson, Jr.* - Psychology

* Member - ACM Committee on Institutional Research

MONMOUTH COLLEGE
James Herbsleb - Economics
Harry S. Manley - Dean of the College
Harold Ralston - Classics and Psychology
Benjamin Shawver - Chemistry

RIPON COLLEGE
Robert Hannaford - Philosophy
David Harris - Dean of Men
Henry Schneider - German
Jean van Hengel - Dean of Women
Leonard Vaughan* - Psychology

ST. OLAF COLLEGE
Orin M. Lofthus - Dean of the College

CONSULTANTS
Dr. T. R. McConnell, Director
Center for the Study of Higher Education
University of California

Professor Theodore M. Newcomb
University of Michigan
Professor George Stern
Syracuse University

STAFF
Blair Stewart - President, ACM

Henry M. Halsted, III - Program Director

Klaus A. Mueller - Language Project Coordinator

Conrad A. Hilberry - Program Associate

BIBLIOGRAPHY OF REFERENCES

(1)

Research on Students

Adorno, T.W., and others, The Authoritarian Personality, New York, Harper, 1950, 990 pp.

Allport, Gordon Willard, Personality: A Psychological Interpretation, New York, Holt, 1937, 588 pp.

Allport, Gordon Willard; Vernon, P.W.; and Lindzey, G., Study of Values, Boston, Massachusetts, Houghton Mifflin, 1951.

American Council on Education, Cooperative Study of Evaluation in General Education, General Education: Explorations in Evaluation, the Final Report of the Study, by Paul L. Dressel and Lewis B. Mayhew, Washington, D. C., American Council on Education, 1954, 302 pp.

American Council on Education, Office of Statistical Information and Research, A Fact Book on Higher Education, Washington, D.C., American Council on Education, 1958-

American Council on Education, Problems and Policies Committee, Spotlight on the College Student, Margaret L. Habein, editor, Washington, D. C., American Council on Education, 1959, 89 pp.

American Educational Research Association, The Coming Crisis in the Selection of Students for College Entrance, Washington, D. C., The Author, 1960, 39 pp.

Angell, R.C., The Campus; A Study of Contemporary Undergraduate Life in the American University, New York, Appleton, 1928, 239 pp.

Asch, Morton Jay, "Nondirective Teaching in Psychology: An Experimental Study," Psychological Monographs 65, No. 4, 1951, 24 pp.

Atkinson, Byron H., and Brugger, A.T., "Do College Students Drink Too Much?" Journal of Higher Education 30:305-312, June, 1959.

Barton, Allen H., Studying the Effects of College Education, New Haven, Connecticut, Edward W. Hazen Foundation, 1959, 96 pp.

Berdie, Ralph F., and others, After High School What? Minneapolis, University of Minnesota Press, 1954, 240 pp.

Bidwell, C. E., editor, The American College and Student Personality: A Survey of Research Progress and Problems, New York, Social Science Research Council, 1960.

Birney, Robert, and Taylor, Marc, "Scholastic Behavior and Orientation in College," Journal of Educational Psychology, 50:266-274, December, 1959.

Bloomgarden, Lawrence, "Our Changing Elite College," Commentary 29:150-154, February, 1960.

Bogue, D. J., The Population of the United States, Glencoe, Illinois, The Free Press, 1959, 873 pp.

Boroff, David, "California's Five-College Experiment," Harper's 219:70-78, December, 1959.

Bossard, James Herbert Siward, Man and His World, New York, Harper, 1932, 755 pp.

Brookover, Wilbur, "The Social Roles of Teachers and Pupil Achievement," American Sociological Review 8:389-393, August, 1943.

Brown, Donald R., "Non-intellective Qualities and the Perception of the Ideal Student by College Faculty," Journal of Educational Sociology 33:269-278, February, 1960.

Brumbaugh, A.J., Research Designed to Improve Institutions of Higher Learning, Washington, D. C., American Council on Education, 1960, 47 pp.

Bushnell, John, "What Are the Changing Characteristics of the Undergraduate and What Do These Changes Mean for Programs of General Education?" in Current Issues in Higher Education, 1959, Proceedings of the Fourteenth Annual National Conference on Higher Education, pp. 137-144, Washington, D. C., Association for Higher Education, National Education Association, 1959.

California, Master Plan Survey of Higher Education, A Master Plan for Higher Education in California, 1960-1975, Sacramento, The Author, 1960.

California, Stockton College, Follow-Up Study, Class of 1958, Stockton, California, The Author, 1960.

Caplow, Theodore and McGee, R.J., The Academic Marketplace, New York, Basic Books, 1958, 262 pp.

Carey, James T., Why Students Drop Out; Study of Evening College Student Motivations, Chicago, Center for the Study of Liberal Education for Adults, 1954, 54 pp.

Clark, Burton R., "College Image and Student Selection," in Conference on Selection and Educational Differentiation, Selection and Educational Differentiation: Proceedings, pp. 155-168, Berkeley, California, The Center for the Study of Higher Education, 1960. (a)

Clark, Burton R., "The 'Cooling-Out' Function in Higher Education," American Journal of Sociology, 65:569-576, May, 1960. (b)

Clark, Burton R., The Open Door College: A Case Study, New York, McGraw-Hill, 1960, 207 pp. (c)

Coleman, and Rossi, Peter H., Study of High Schools undertaken at the Department of Sociology, University of Chicago, 1960.

College Entrance Examination Board, College Admissions, no. 1-6, Princeton, New Jersey, The Board, 1954-1959.

Conference on Selection and Educational Differentiation, Selection and Educational Differentiation: Proceedings, Berkeley, California, The Center for the Study of Higher Education, 1960, 187 pp.

David, Opal D., editor, The Education of Women -- Signs for the Future, Washington, D. C., American Council on Education, 1959, 153 pp.

Dressel, Paul L., Evaluation in the Basic College at Michigan State University. New York, Harper, 1958, 248 pp.

Eddy, Edward D., The College Influence on Student Character, Washington, D. C., American Council on Education, 1959, 185 pp.

Educational Testing Service, Background Factors Relating to College Plans and College Enrollment Among Public High School Students, Princeton, New Jersey, The Author, 1957.

Erikson, E.H., "Growth and Crises of the Healthy Personality," in Conference on Problems of Infancy and Childhood, Symposium on the Healthy Personality, Transactions of the special meetings of the conference, edited by Milton J.E. Senn, New York, Josiah Macy, Jr., Foundation, 1950.

Farnsworth, Dana L., "Some Non-Academic Causes of Success and Failure in College Students," in College Entrance Examination Board, College Admissions, no. 2, pp.72-78, Princeton, New Jersey, The Board, 1955.

Faw, Volney, "A Psychotherapeutic Method of Teaching Psychology," American Psychologist 4:104-109, April, 1949.

Festinger, Leon, and Schachter, Stanley, Social Pressures in Informal Groups: A Study of Human Factors in Housing, New York, Harper, 1950, 240 pp.

Fishman, Joshua A., "Non-Intellective Factors as Predictions, as Criteria, and as Contingencies in Selection and Guidance of College Students: A Socio-psychological Analysis," in Conference on Selection and Educational Differentiation, Selection and Educational Differentiation: Proceedings, pp. 55-73, Berkeley, California, The Center for the Study of Higher Education, 1960.

Fishman, Joshua A., "Unsolved Criterion Problems in the Selection of College Students," Harvard Educational Review, 28:340-349, fall, 1958. (a)

Fishman, Joshua A., "The Use of Tests for Admission to College: the Next Fifty Years," in Educational Conference, 1957, Long-Range Planning for Education, pp. 74-79, Washington, D. C., American Council on Education, 1958. (b)

Freedman, Mervin, "Some Observations on Personality Development in College Women," Student Medicine 8:228-245, February, 1960.

Fricke, Benno G., "Prediction, Selection, Mortality and Quality Control," College and University 32:34-52, fall, 1956.

Funkenstein, Daniel H., "What Does Higher Education Need to Know About the Student in Today's Changing Society?" in Current Issues in Higher Education, 1960, Proceedings of the Fifteenth Annual National Conference on Higher Education, pp. 160-164, Washington, D. C., Association for Higher Education, National Educational Association, 1960.

Gee, Helen and Glaser, Robert, editors, The Ecology of the Medical Student, Evanston, Illinois, Office of the Director of Research, Association of American Medical Colleges, 1958, 262 pp.

Geutzkow, Harold; Kelley, E. Lowell; and McKeachie, W.J., "An Experimental Comparison of Recitation, Discussion and Tutorial Methods in College Teaching," Journal of Educational Psychology 45:193-207, April, 1954.

Gladstein, Gerald A., The Relationship Between Study Behaviour and Personality for Academically Successful Students, Chicago, University of Chicago, 1957. (Unpublished Ph.D. dissertation)

Gladstein, Gerald A., "Study Behaviour of Gifted Stereotype and Non-stereotype College Students," Personnel and Guidance Journal 38:470-474, February, 1960.

Glass, Bentley, "The Academic Scientist: 1940-1960," American Association of University Professors Bulletin 46:149-155, summer, 1960.

Goldsen, Rose K., and others, What College Students Think, Princeton, New Jersey, Van Nostrand, 1960, 240 pp.

Griffiths, Daniel Edward, Research in Educational Administration, New York, Teachers College, Columbia University, 1959, 59 pp.

Hall, Thomas, S., "In What Ways Can the College Best Assist the Student in Developing His Basic Pattern of Values?" in Current Issues in Higher Education, 1960, Proceedings of the Fifteenth Annual National Conference on Higher Education, pp. 157-159, Washington, D. C., Association for Higher Education, National Education Association, 1960.

Halsey, A. H., "British Universities and Intellectual Life, "Universities Quarterly 12:141-152, February, 1958.

Havemann, Ernest, and West, Patricia Salter, They Went to College, New York, Harcourt, Brace, 1952, 277 pp.

Heath, S. Roy, "Personality and Student Development," in Pittsburgh University, New Dimensions of Learning in a Free Society, pp.225-245, Pittsburgh, University of Pittsburgh Press, 1958.

Heath, S. Roy, "The Reasonable Adventurer and Others--A Two Factor Model of Ego Functioning," Journal of Counseling Psychology 6:3-12, spring, 1959.

Heilman, Robert B., "Fashions in Melodrama,"American Association of University Professors Bulletin 45:360-373, September, 1959.

Heist, Paul, "Diversity in College Student Characteristics "Journal of Educational Sociology 33:279-291.

Heist, Paul, "Variations in the Personality Characteristics of Under-achieving College Students," paper presented at the Symposium of the Under-achieving College Student at the American College Personnel Association meeting, spring, 1960. (b)

Heist, Paul, and Webster, Harold, "Differential Characteristics of Student Bodies--Implications for Selection and Study of Undergraduates," in Conference on Selection and Educational Differentiation, Selection and Educational Differentiation: Proceedings, pp. 91-106, Berkeley, California, The Center for the Study of Higher Education, 1960.

Holland, John L., "Undergraduate Origins of American Scientists," Science 126;433-437, September 6, 1957.

Hollinshead, Byron S., Who Should Go To College, New York, Columbia University Press, 1952, 190 pp.

Hollis, E. V., Factors Related to Application, Admission, Registration, and Persistence in College, Cooperative Research Project no. 166, Washington, D. C., Division of Higher Education, U.S. Office of Education, n.d.

Holmes, Charles H., "Why They Left College; A study of Voluntary Freshman Withdrawals from the College of Liberal Arts at Syracuse University," College and University 34:295-300, spring, 1959.

Homans, George C., The Human Group, New York, Harcourt Brace, 1950, 484 pp.

Horn, Francis H., "Who Should Go To College?" in Current Issues in Higher Education, 1955, Proceedings of the Tenth Annual National Conference on Higher Education, pp. 38-46, Washington, D. C., Association for Higher Education, National Education Association, 1955.

Iffert, Robert E., "Drop-Outs: Nature and Causes, Effects on Student, Family and Society," in Current Issues in Higher Education, 1956, Proceedings of the Eleventh Annual National Conference on Higher Education, pp. 94-102, Washington, D.C., Association for Higher Education, National Education Association, 1956. (a)

Iffert, Robert E., Retention and Withdrawal of College Students, Bulletin, no. 1, Washington, D.C., U.S. Office of Education, 1958, 177 pp.

Iffert, Robert E., "The Student Retention and Withdrawal Study," College and University 30:406-411, July, 1955.

Iffert, Robert E., "Study of College Student Retention and Withdrawal," College and University 31:425-447, summer, 1956. (b)

Iffert, Robert E., "What Ought Colleges and Universities To Do About Student Mortality?" in Current Issues in Higher Education, 1954, Proceedings of the Ninth Annual National Conference on Higher Education, pp. 170-180, Washington, D. C., Association for Higher Education, National Education Association, 1954.

Iowa, State University, A Study of Student Persistence at the State University of Iowa, Iowa City, Office of the Registrar, 1959.

Jacob, Philip Ernest, Changing Values in College, New York, Harper, 1957, 174 pp.

Jencks, C., "The Academic Subculture," in Harvard University, Department of Sociology, Character and Social Structure in America; Selected Papers From Social Sciences 136, 1959, Cambridge, Harvard Printing Office, 1960.

Jex, Frank B., and Merrill, Reed M., "Intellectual and Personality Characteristics of University of Utah Students," Journal of Educational Research 53:118-120, November, 1959.

Johnson, Burges, Campus Versus Classroom, New York, I. Washburn, 1946, 305 pp.

Kahl, Joseph A., "Educational and Occupational Aspirations of 'Common Man'Boys," Harvard Educational Review 23:186-203, summer, 1953.

Kerr, Fred L., "Studies on the Freshman Class of 1956 at the University of Arkansas," College and University, 34:186-199, winter, 1959.

Kluckholn, Clyde, "Have There Been Discernable Shifts in American Values During the Past Generation?" in Morison, Elting E., editor, The American Style, pp. 145-217, New York, Harper, 1958.

Knapp, Robert Henry, and Goodrich, H.B., Origins of American Scientists, Chicago, University of Chicago Press, 1952, 450 pp.

Knapp, Robert Henry, and Greenbaum, Joseph J., The Younger American Scholar: His Collegiate Origins, Chicago, University of Chicago Press, 1953, 122 pp.

Lazarsfeld, Paul Felix, and Thielens, Wagner, The Academic Mind, Glencoe, Illinois, The Free Press, 1958, 460 pp.

Lehmann, Irvin Jack, and Ikenberry, S.O., Critical Thinking, Attitudes, and Values in Higher Education, East Lansing, Michigan State University, 1959, mim.

Lewin Kurt; Lippitt, Ronald; and White, Ralph K.,"Patterns of Aggressive Behaviour in Experimentally Created 'Social Climates'," Journal of Social Psychology, 10:271-299, May, 1939.

Lins, L.J., and Pitt, Hy, "The 'Staying Power' and Rate of Progress of University of Wisconsin Freshman," College and University., 29:86-99, October, 1953.

Little, J. Kenneth, "College Scholarships in Wisconsin," Educational Record, 40:348-352, October, 1959. (a)

Little, J. Kenneth, Explorations Into the College Plans and Experiences of High School Graduates, Madison, School of Education, University of Wisconsin, 1959. (b)

Little, J. Kenneth, "The Wisconsin Study of High School Graduates," Educational Record 40:123-128, April, 1959. (c)

Lord, Frederic M., "An Approach to Mental Test Theory," Psychometrika 24: December, 1959.

McLelland, David C., and others, Talent and Society, New York, Van Nostrand, 1958, 275 pp.

McConn, Charles Maxwell, College or Kindergarten? New York, New Republic, 1928, 275 pp.

McConnell, Thomas R., The Rediscovery of the Gifted Student, Berkeley, California, The Center for the Study of Higher Education, 1959.

McConnell, Thomas R., and Heist Paul, "The Diverse College Student Population," in Sanford, Nevitt, editor, The American College, New York, Wiley, in press.

McConnell, Thomas R., and Heist, Paul, "Do Students Make the College?" College and University 34:442-452, summer, 1959.

McFee, A., The Relation of Selected Factors to Students' Perception of a College Environment, Rochester, New York, Syracuse University, 1959 (Unpublished master's thesis).

McNeeley, John H., College Student Mortality, Bulletin no. 11, Washington, D. C., U. S. Office of Education, 1937, 112 pp.

Medsker, Leland L., The Junior College, New York, McGraw-Hill, 1960, 367 pp.

Merton, Robert, and others, The Student Physician: Introductory Studies in the Sociology of Medical Education, Cambridge, Massachusetts, Harvard University Press, 1957, 360 pp.

Miller, N., "Academic Climate and Student Values," paper read at American Sociological Society, Chicago, September, 1959.

Mueller, Kate Hevner, "The Married Student on the Campus," College and University, 35:155-163, winter, 1960.

Murphy, Gardner, Human Potentialities, New York, Basic Books, 1958, 340 pp.

Murray, H.A., and others, Explorations in Personality, New York, Oxford University Press, 1938, 761 pp.

Newcomb, Theodore M., Personality and Social Change: Attitude Formation in a Student Community, New York, Dryden Press, 1943, 225 pp.

Newcomb, Theodore M., Research undertaken in the Department of Psychology at the University of Michigan, 1960.

Pace, C. Robert, "Five College Environments" College Board Review 41:24-28, spring, 1960.

Pace, C. Robert and Stern, George G., "An Approach to the Measurement of Psychological Characteristics of College Environments," Journal of Educational Psychology, 49:269-277, October, 1958. (b)

Pace, C. Robert and Stern, George G., A Criterion Study of College Environment, Syracuse, New York, Psychological Research Center, 1958 (a)

Patton, Joseph Alexander, "A Study of the Effects of Student Acceptance of Responsibility and Motivation on Course Behaviour," Dissertation Abstracts, 15:637-638, April, 1955.

Riesman, David, "The Academic Career: Notes on Recruitment and Colleagueship" Daedalus 88:147-169, 1959. (a)

Riesman, David, Constraint and Variety in American Education, New York, Doubleday Anchor Books, 1958, 174 pp. (a)

Riesman, David, "The Influence of Student Culture and Faculty Values in the American College," in Bereday, George Z.F., and Lauwerys, Joseph A., editors, The Year Book of Education 1959: Higher Education, pp. 386-404, Yonkers-on-Hudson, New York, World Book, 1959. (b)

Riesman, David, and Jencks, C., "The Viability of the American College," in Sanford, Nevitt, editor, The American College, New York, Wiley, in press.

Rogers, C. R., Counseling and Psychotherapy, Boston, Houghton, Mifflin, 1942, 450 pp.

Rosenberg, Morris, Occupations and Values, Glencoe, Illinois, The Free Press, 1957, 158 pp.

Sanford, Nevitt, editor, "Personality Development During the College Years," Journal of Social Issues 12:3-72, 1956.

Selvin, H., and Hagstrom, W., "Determinants of Support for Civil Liberties," British Journal of Sociology 11:51-73, March, 1960.

Siegelman, Marvin, "Personality Patterns in Three Vocational Groups," Dissertation Abstracts, 18:2063, June 1958.

Slater, John Marlowe, "Perception; a Context for the Consideration of Persistence and Attrition Among College Men," Personnel and Guidance Journal 35:435-440, March, 1957.

Smith, John E., Value Conviction and Higher Education, New Haven, Connecticut, Edward W. Hazen Foundation, 1958, 36 pp.

Smith, Sherman E., and others, Are Scholarships the Answer? Albuquerque, University of New Mexico Press, 1960, 89 pp.

Sprague, Hall T., Institutional Research in the West, Boulder Colorado, Western Interstate Commission for Higher Education, 1959, 78 pp

Stern, George G., "Congruence and Dissonance in the Ecology of College Students," Student Medicine 8:304-339, 1960.

Stern, George G. The Ecology of the American College Student: Varieties of Constraint in American Education, Syracuse, New York, Syracuse University, 1959, mim.

Stern, George G., "Environments for Learning," in Sanford, Nevitt, editor, Social Science and Higher Education, New York, Society for the Psychological Study of Social Issues, in press.

Stern, George G., Preliminary Manual: for the Activities Index and College Characteristics Index, New York, Psychological Research Center, 1958, mim.

Stern, George G., and Scanlon, John C., "Pediatric Lions and Gynecological Lambs," Journal of Medical Education 33 (Part 2): 12-18, October, 1958.

Stern, Goerge G.; Stein Morris I.; and Bloom, Benjamin S., Methods in Personality Assessment, Glencoe, Illinois, The Free Press, 1956, 271 pp.

"The Student as a Source of Strength," in Current Issues in Higher Education, 1956, Proceeedings of the Eleventh Annual National Conference on Higher Education, pp. 58-117, Washington, D. C., Association for Higher Education, National Education Association, 1956.

Thistlethwaite, Donald L., "College Environments and the Development of Talent," Science 130:71-76, July 10, 1959. (a)

Thistlethwaite, Donald L., "College Press and Student Achievement," Journal of Educational Psychology 50:183-19[illegible], October, 1959. (b)

Trow, Martin, "Cultural Sophistication and Higher Education," in Conference on Selection and Educational Differentiation, Selection and Educational Differentiation: Proceedings, pp. 107-123, Berkeley, California, The Center for the Study of Higher Education, 1960.

Trow, Martin A., "Reflections on the Recruitment to College Teaching," in Gustad, John W., editor, Faculty Supply, Demand and Recruitment: Proceedings of a Regional Conference, pp. 51-73, Winchester, Massachusetts, New England Board of Higher Education, 1959.

Trow, Martin, "Some Implications of the Social Origins of Engineers," in National Science Foundation, Scientific Manpower, 1958, pp. 67-74, Washington, D. C., U. S. Government Printing Office, 1959.

Ulich, Robert, "The Contemporary Academic Scene in the United States," in Bereday, George Z. F., and Lauwerys, Joseph A., editors, The Year Book of Education 1959: Higher Education, pp. 122-130, Yonkers-on-Hudson, New York, World Book, 1959.

Warren, Jonothan R., and Heist, Paul A., "Personality Attributes of Gifted College Students," Science 132:330-337, August, 1960.

Webster, Harold, "Changes in Attitudes During College," Journal of Educational Psychology 49:109-117, June, 1958.

Webster, Harold, "A Generalization of Kuder-Richardson Reliability Formula 21," Educational and Psychological Measurement 20:131-138, spring, 1960.

Webster, Harold, VC Attitude Inventory and VC Figure Preference Test-Research Manual, Poughkeepsie, New York, Mary Conover Mellon Foundation, Vassar College, 1957.

Webster, Harold; Freedman, Mervin; and Heist, Paul, "Personality Changes in College Students," in Sanford, Nevitt, editor, The American College, New York, Wiley, in press

Webster, Harold and Heist, Paul, "Construction of a Multiple Score Personality Test for Use with College Populations," Research report for the Social Science Research Council Conference on Personality Measures Relevant to College Purposes, January, 1959 (in revision for publication).

Wedge, Bryant M., editor, Psychosocial Problems of College Men, New Haven, Connecticut, Yale University Press, 1958, 291 pp.

White, Reuel C., These Will Go to College, Cleveland, Western Reserve University Press, 1952, 108 pp.

Wilson, Woodrow, "The Spirit of Learning," in his Selected Literary and Political Papers and Addresses, Vol. 1, pp. 244-265, New York, Grosset and Dunlap, 1926.

Wise, William Max, They Come for the Best of Reasons, Washington, D. C., American Council on Education, 1958, 65 pp.

Wispe, Lauren G., "Evaluating Section Teaching Methods in the Introductory Course," Journal of Educational Research 45:161-186, November, 1951.

Wolfle, Dael, America's Resources of Specialized Talent, New York, Harper, 1954, 332 pp.

Zetterberg, H. L., An American College for Adults, New York, Columbia University, Bureau of Applied Social Research, 1958, mim.

Research on Faculty(2)

Berelson, Bernard, Graduate Education in the United States, New York, McGraw-Hill Book Co., 1960, 346 pp.

Berwald, Helen, Attitudes and Practices Regarding the Employment and Advancement of Women Faculty Members, Doctoral dissertation in progress, University of Minnesota.

Clark, Kenneth, American Psychologists: A Growing Profession, Washington, American Psychological Association, 1957, 247 pp.

Caplow, Theodore and McGee, Reece J., The Academic Marketplace, New York, Basic Books, 1959, 262 pp.

Cooley, William W., "Attributes of Potential Scientists," Harvard Educational Review 28:1-18, winter, 1958.

Corcoran, Mary E., Where Does College Teaching Stand in the Career Plans of Superior College Students? Bureau of Institutional Research, University of Minnesota, April, 1961, Multilith, 75 pp.

Eckert, Ruth E., College Teachers of Education in Minnesota, Bureau of Institutional Research, University of Minnesota, December, 1956, mim., 22 pp.

Eckert, Ruth E., "When School Teachers Join College Teachers," North Central Association Quarterly 34:161-166, October, 1959.

Eckert, Ruth E., "Who Teach in Departments and Schools of Education?" Journal of Teacher Education 10:497-502, December, 1959.

Eckert, Ruth E., "Faculty Views on the Recruitment of College Teachers," Journal of Higher Education 33:244-251, May, 1960.

Eckert, Ruth E., and Stecklein, John E.,"Academic Women, Liberal Education: Association of American Colleges Bulletin 45:390-397, October, 1959.

Eckert, Ruth E., "Career Motivations and Satisfactions of Junior College Teachers, Junior College Journal 30:83-89, October, 1959.

Eckert, Ruth E., Religious Faculty Members View Their Jobs, The Catholic Educational Review 57:433-441, October, 1959.

Eckert, Ruth E., and Sagen, H. Bradley, "College Faculty Members View Their Jobs," American Association of University Professors Bulletin 45:513-528, winter, 1959.

Ginzberg, Eli, and others, Occupational Choice: An Approach to General Theory, New York, Columbia University Press, 1951, 271 pp.

Goodstein, Leonard, "Institutional Research on Students: A Summing Up," in Sprague Hall T., editor, Research on College Students, Denver, Western Interstate Commission on Higher Education, December, 1960, pp. 124-130.

Gropper George L., and Fitzpatrick, R., Who Goes to Graduate School? Pittsburgh, American Institute for Research, September, 1959, 66 pp.

Guba, Egon, Teacher Effectiveness, Teacher Satisfaction, and Administrative Behaviour: A Study of the School as a Social Institution, Studies in Educational Administration, Midwest Administration Center, University of Chicago, 1957.

Gustad, John, The Career Decisions of College Teachers, SREB Research Monograph Series No. 2., Southern Regional Education Board, 1960, 87 pp.

Houghes, Everett, "Institutional Office and the Person." American Journal of Sociology, 43:409-413, 1937.

Kille, Frank, A Study of the Baccalaureate Origins of College Teachers, Washington, Association of American Colleges, 1959, 7pp.

Knapp. Robert H., and Greenbaum, Joseph J., The Younger American Scholar: His Collegiate Origins, Chicago, University of Chicago Press., 1953.

McConnell, T. R., and Heist, Paul, "Do Students Make the College?" College and University 34:442-452, summer, 1959.

Medsker, Leland, The Junior College: Progress and Prospect, New York, McGraw-Hill Book Co., 1960, 367 pp.

Merton, Robert K., and others, Student-Physicians: Introductory Studies in the Sociology of Medical Education, Cambridge, Massachusetts, Harvard University Press, 1957, 360 pp.

National Education Association, Research Division, Teacher Supply and Demand in the Universities, Colleges and Junior Colleges, 1957-58 and 1958-59, Higher Education Report 1959-R10, Washington, the Association, 1959.

O'Dowd, Donald D., and Beardslee, David C., College Student Images of a Selected Group of Professions & Occupations, Washington, U. S. Office of Education, Cooperative Research Program No. 563 (8142) April, 1960.

Office of Statistical Information and Research, American Council on Education, A Fact Book on Higher Education, Washington, the Council, 1960, 237 pp.

Pace, C. Robert and Stern, George B., "An Approach to the Measurement of the Psychological Characteristics of College Environments," Journal of Educational Psychology 49:269-277, October, 1958.

Roe, Anne, The Psychology of Occupations--New York, John Wiley and Sons, 1956, 340 pp.

Roe, Anne, The Making of a Scientist, New York, Dodd, Mead and Company, 1953, 244 pp.

Schaffer, R. H., "Job Satisfaction as Related to Need Satisfaction in Work," Psychological Monographs 67:2-29, 1953.

Stecklein, John E. and Eckert, Ruth E., An Exploratory Study of Factors Influencing the Choice of College Teaching as a Career, Bureau of Institutional Research, University of Minnesota, January, 1958, Multilithed, 90 pp.

Stecklein, John E., and Eckert, Ruth E., How University of Minnesota Faculty Members Become College Teachers, University of Minnesota November 1958, Multilithed, 18 pp.

Stecklein, John E., and Lathrop, Robert Faculty Attraction and Retention: Factors Affecting Faculty Mobility at the University of Minnesota, November, 1958, Multilithed, pp..

Stedman, R. Edith, Relation of Masculinity-Femininity Measures to Perception of Self, Chosen Occupation, and College Teaching Among University Honor Students, Doctoral dissertation in progress, University of Minnesota.

Stern, George B., and Masling, Joseph M., Unconscious Factors in Career Motivation for Teaching, Washington, U. S. Office of Education, 1959, mim., 123 pp.

Strothmann, F. W., The Graduate School of Today and Tomorrow, New York, Fund for the Advancement of Education, 1955, 42 pp.

Super, Donald E., and others, Vocational Development: A Framework for Research, Career Pattern Study Monograph No. 1, New York, Teachers College, Columbia University, 1957, 142 pp.

Tiedeman, David V.; O'Hara, Robert D.; and Matthews, Esther, "Position Choice and Career Development in Men and Women: A Conceptual Framework," Harvard Studies in Career Development No. 8, October, 1957, mim., 63 pp.

Thistlethwaite, Donald L., College Press and Changes in Study Plans of Talented Students, Journal of Educational Psychology 51:222-234, August, 1960.

U. S. Employment Service, Dictionary of Occupational Titles, Vol. II., Occupational Classifications, 3rd Ed., Government Printing Office, 1949. 1355 pp.

Other Related Readings

American Educational Research Association, "The Philosophical and Social Framework of Education," Review of Educational Research, 31:1, February, 1961. 113 pp.

Birney, Robert C., and others, The Class of 1959 at Amherst College, Amherst, Massachusetts, Committee on Guidance and Counseling, Amherst College, 1960, 89 pp.

College Entrance Examination Board, Counseling in School and College, New York, College Entrance Examination Board, 1961, 71 pp.

Gustad, John W., "Policies and Practices in Faculty Evaluation," The Educational Record, July 1961, pp.194-211.

Harvard Educational Review, "A Special Issue:Theory and Research in Sociology and Education", 34:4, fall, 1959, 408 pp.

Ikeda, Kiyoshi, The Oberlin Art and Music Study, Oberlin College, Oberlin, Ohio, 1960, 103 pp.

Sanford, R. N., The American College, New York, Wiley, in press.

Stecklein, John E., How to Measure Faculty Work Load, Washington, D.C., American Council on Education, 1961, 53 pp.

Stewart, Blair, "Independent Study," as cited in Preparation for Medical Education: A Restudy, Severinghaus, and others, editor, New York, McGraw-Hill Book Co., pp. 304-307.

Taylor, R. Robb, Proceedings of an Institute on College Teaching, Marquette University, Milwaukee, Wisconsin, 1961, 18 pp.

Thorp, Willard L., and others, Report of the Committee on the Future Size of the College and Related Subjects, Amherst College, Amherst, Massachusetts, 1960, 42 pp.

Tyrell, Philip H., "Project 'Reward' -- A Program of Institutional Research to Increase Institutional Productivity," The Educational Record, July 1961, pp. 212-220.

Western Interstate Commission for Higher Education, Three Reports of Institutional Research on College Students, Boulder, Colorado, Western Interstate Commission for Higher Education, 1960, 26 pp.

ACM Research (Incomplete)

Coe College, Studying the Means and Ends of Liberal Education at Coe, Report of the 3-3 Study Committee, summer, 1961, 72 pp.

Knox College, The Perception of Knox by its Graduates, 1954-58, a study conducted by Robert S. Harper for the Committee on Independent Studies, 14 pp.

Knox College, An Investigation Into An Independent Studies Program with a View to Introducing a Program of More Student Responsibility for Education at Knox College, prepared by the Faculty Steering Committee on Independent Studies, 56 pp.

Knox College, Study Activity of 100 Knox Women, Spring, 1960. Prepared by the Committee on Independent Study, 36 pp.

FOOTNOTES

(1) The bibliography on Research on Students was taken from H. T. Sprague (editor), Research on College Students: Institute Lectures Considering Recent Research on College Students' Motivations, Values and Attitudes, and Campus Cultures, Boulder, Colorado, Western Interstate Commission for Higher Education, 1960, pp. 177-188.

(2) The bibliography on Research on Faculty was taken from Eckert, Ruth E., and Stecklein, John E., Job Motivations and Satisfactions of College Teachers: A Study of Faculty Members in Minnesota Colleges, Washington, D. C., U. S. Office of Education, Cooperative Research Monograph No. 7., 1961, 96 pp.